

SUPPORT FOR THE AMENDMENT

Support for the amendment to claim 6 is found on page 5, lines 7-15 of the specification. No new matter would be added to this application by entry of this amendment.

Upon entry of this amendment, claims 6-13 will remain active in this application.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a food product comprising an oil composition and food.

Applicants wish to thank examiner Rae and supervisory patent examiner Marchel for the helpful and courteous discussion held with their U.S. representative on January 24, 2007. At that time, applicants' U.S. representative noted that the claims are directed to an oil composition in which the diglyceride component contained specified amounts of ω -3 unsaturated acyl groups having at least 20 carbon atoms and specific percentages of monoenoic acyl groups. The following is intended to expand the discussion with the examiners.

Diglyceride compositions have gained interest based on a disclosed obesity-preventing effect. In addition, ω -3 type unsaturated fatty acids having at least 20 carbon atoms such as docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), principle components of fish oil triglycerides, have been reported to have beneficial health properties. ω -3 Type unsaturated fatty acid have been reported to have very poor oxidation stability (page 2, lines 17-19 of the specification) while diglycerides of ω -3 type unsaturated fatty acids have exhibited very high viscosities (page 2, line 27 through page 3, line 5 of the specification). Accordingly, diglyceride containing compositions of ω -3 unsaturated fatty acids having good stability and viscosity are sought.

The claimed invention addresses this problem by providing a food product comprising an oil composition and food wherein the diglycide component has 15-89.5 wt. % of ω -3 unsaturated acyl group having at least 20 carbon atoms with 10-84.5 wt% of monoenoic acyl groups. Applicants have discovered that such a distribution of ω -3 unsaturated fatty acids and monoenoic acyl groups provide for an oil composition having good stability and viscosity. Such a composition is nowhere disclosed or suggested in the cited and applied prior art of record.

The rejection of claims 6-13 under 35 U.S.C. § 103(a) over Zaks et al. (U.S.P. 5,935,828) in view of Ono et al. (U.S.P. 5,962,058) in view of Nomura et al. (U.S.P. 5,160,759), in view of Bijl et al. (U.S.P. 6,255,505), in view of Barclay (U.S.P. 5,130,242), in further view of Brown et al. (U.S.P. 5,288,619), further in view of Goto et al. (U.S.P. 6,139,897), further in view of DelVento (U.S.P. 4,701,338), and further in view of Ciani is respectfully traversed.

None of the cited prior art of record discloses or suggests the claimed food product in which the diglyceride is comprised of quantified amounts of ω -3 unsaturated acyl groups and monoenoic acyl groups.

Zaks et al. (U.S.P. 5,935,828) merely describes compositions resulting from a lipase-catalyzed transesterification followed by the low temperature crystallization. (col. 2, lines 14-21). The product is a highly pure **monoglyceride** enriched in ω -3 fatty acids (col. 2, lines 33-36). While the reference describes that diglyceride compositions may be formed esterification or transesterification of the enriched monoglyceride, there is no disclosure or suggestion of a diglyceride composition containing 10-84.5 wt% of **monoenoic acyl groups**.

Ono et al. is directed to a glyceride composition in which a diglyceride component is comprised of **saturated** fatty acids (see Abstract). There is no disclosure or suggestion of **monoenoic acyl groups** in the diglyceride component.

Nomura et al. (U.S.P. 5,160,759) broadly describes a composition containing diglycerides of C₁₆₋₂₂ unsaturated fatty acids but fail to disclose or suggest an amount of 10-84.5 wt. % of monoenoic acyl groups in the diglyceride. Further, there is no disclosure of an amount of 15-89.5 wt% of ω -3 unsaturated fatty acids.

Based on these three references, the examiner concludes that “someone skilled in the art at the time the invention of the instant application was made would have been motivated to combine the teachings of Zaks et al. in view of Ono et al. and further in view of Nomura et al. to obtain the benefit of the rich, fatty savor and the ease of preparation of the oil-in-water emulsion taught by Nomura et al.”

However, the combined teachings of the three references fails to disclose or suggest the claim limitation of 10-84.5 wt% of monoenoic acyl groups in the diglyceride component.

In contrast, the claimed invention is directed to a food product comprising an oil composition and food wherein the diglyceride component of the oil composition have a content of 10-84.5 wt% of monoenoic acyl groups constituting the diglyceride. As the cited references fails to disclose or suggest this claim limitation, the claimed invention is clearly not rendered obvious from this combination of references and accordingly withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

The additional disclosures of Bijl et al., Barclay and Brown et al. have been cited with an assertion that these three references, combined with Zaks et al., Ono and Nomura would have been combined for economic and health reasons.

However, the combined teachings of all six references fails to disclose or suggest the claimed monoenoic acyl group limitation.

Bijl et al. fails to disclose a diglyceride component with ω 3 unsaturated fatty acids and acylated monoenoic fatty acid constituents (page 6, lines 19-21 of the outstanding Official Action).

Barclay merely describes a culturing process for producing ω -3 highly unsaturated fatty acids. There is no disclosure or suggestion of **diglycerides** nor the claimed invention of 10-84.5 wt% of monoenoic acyl groups.

Brown et al. merely describes the preparation of a **hydrogenated** transesterified stearic acid or stearic acid monoester triglyceride (see Abstract). As a result of hydrogenation unsaturation units as claimed should be destroyed. The reference fails to disclose or suggest the claimed monoenoic acyl group limitation.

Accordingly, while page 7 of the Official Action asserts that there would be motivation to combine the teachings of these six references, the combined teachings fails to disclose or suggest the claimed invention as there is no disclosure or suggestion of the claimed monoenoic acyl group claim limitation.

Goto et al. (U.S. 6,139,897) is cited for a disclosure of an oil and fat composition. However, Goto et al. was not published until October 31, 2000, after Applicants' effective U.S. filing date based on PCT/JP 00/004499, filed on July 6, 2000. Thus, Goto et al. is not available under 35 USC 102(A) or (B), but rather would be available as a prior art under 35 U.S.C. § 102(e) as of its U.S. filing date of February 17, 1999.

Clear and Conspicuous Statement Concerning Common Ownership

The above-identified application and Goto (U.S. 6,139,897), at the time of invention of the above-identified application was made, was owned by Kao Corporation.

Since the reference is only available under 35 U.S.C. § 102(e), and the above-identified application and the cited patent were commonly owned at the time of invention of the above-identified application, the disclosure of Goto shall not preclude patentability (35 U.S.C. § 103(c)).

The remaining references of DelVento and Ciani are merely cited to describe components of food compositions and fail to disclose or suggest the claimed monoenoic acyl group claim limitation.

As the combined teachings of the cited references fail to disclose or suggest the claimed monoenoic acyl group claim limitation, the claimed invention is clearly not rendered obvious by the collection of references and accordingly withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

The rejection of claims 6-13 under 35 U.S.C. § 112, second paragraph has been obviated by appropriate amendment.

Applicants have now amended the claims as suggested by the examiner to describe acyl groups "constituting" the diglyceride as suggested by the examiner. This is not a narrowing of the claim for the purposes of patentability, but merely a clarification as to the meaning of the claim limitation with respect to weight percentages of specific acyl groups. In view of applicants' amendments, withdrawal of this ground of rejection is respectfully requested.

Applicants submit this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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